

Reprinted with permission from NFPA 70-1968, the National Electrical Code®, Copyright© 1967, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

National Electrical Code® and NEC® are registered trademarks of the National Fire Protection Association, Inc., Quincy, MA 02269.

Chapter 1. General

ARTICLE 100 - DEFINITIONS

General guides for this Article on Definitions include: (1) for simplicity, only definitions essential to the proper use of the Code are included; (2) only those terms used in two or more Articles are defined in full in Article 100, other definitions being defined in the individual Article where they apply; (3) in general, NEC® definitions will be the same as definitions in the latest revision of USAS C-42 series, "Definitions of Electrical Terms," and are so identified by an asterisk*.

***Accessible:** (As applied to wiring methods.) Not permanently closed in by the structure or finish of the building; capable of being removed without disturbing the building structure or finish. (See "Concealed" and "Exposed.")

***Accessible:** (As applied to equipment.) Admitting close approach because not guarded by locked doors, elevation or other effective means. (See "Readily Accessible.")

Ampacity: Current-carrying capacity expressed in amperes.

Anesthetizing Location: See Section 517-1(b).

Appliance: An appliance is utilization equipment, generally other than industrial, normally built in standardized sizes or types, which is installed or connected as a unit to perform one or more functions such as clothes washing, air conditioning, food mixing, deep frying, etc.

Appliance - Fixed: An appliance which is fastened or otherwise secured at a specific location.

Appliance - Portable: An appliance which is actually moved or can easily be moved from one place to another in normal use.

Appliance - Stationary: An appliance which is not easily moved from one place to another in normal use.

Approved: Acceptable to the authority enforcing this Code.

***Askarel:** A synthetic nonflammable insulating liquid which, when decomposed by the electric arc, evolves only nonflammable gaseous mixtures.

***Attachment Plug (Plug Cap) (Cap):** An attachment plug is a device which, by insertion in a receptacle, establishes connection between the conductors of the attached flexible cord and the conductors connected permanently to the receptacle.

***Automatic:** Automatic means self-acting, operating by its own mechanism when actuated by some impersonal influence, as for example, a change in current strength, pressure, temperature, or mechanical configuration. (See "Nonautomatic.")

Block (City, Town, or Village): See Section 800-2.

Bonding Jumper: A reliable conductor to assure the required electrical conductivity between metal parts required to be electrically connected.

Bonding Jumper, Circuit: The connection between portions of a conductor in a circuit to maintain required ampacity of the circuit.

Bonding Jumper, Equipment: The connection between two or more portions of the equipment grounding conductor.

Bonding Jumper, Main: The connection between the grounded circuit conductor and the equipment grounding conductor at the service.

***Branch Circuit:** A branch circuit is that portion of a wiring system extending beyond the final overcurrent device protecting the circuit.

A device not approved for branch circuit protection such as a thermal cutout or motor overload protective device is not considered as the overcurrent device protecting the circuit.

***Branch Circuit - Appliance:** An appliance branch circuit is a circuit supplying energy to one or more outlets to which appliances are to be connected; such circuits to have no permanently connected lighting fixtures not a part of an appliance.

Branch Circuit - General Purpose: A branch circuit that supplies a number of outlets for lighting and appliances.

Branch Circuit - Individual: A branch circuit that supplies only one utilization equipment.

Branch Circuit, Multiwire: A multiwire branch circuit is a circuit consisting of two or more ungrounded conductors having a potential difference between them, and an identified grounded conductor having equal potential difference between it and each ungrounded conductor of the circuit and which is connected to the neutral conductor of the system.

Building: A structure which stands alone or which is cut off from adjoining structures by fire walls with all openings therein protected by approved fire doors.

***Cabinet:** An enclosure designed either for surface or flush mounting, and provided with a frame, mat or trim in which swinging doors are hung.

Cell (As Applied to Raceways): See Sections 356-1 and 358-1.

Circuit Breaker: A device designed to open and close a circuit by nonautomatic means, and to open the circuit automatically on a predetermined overload of current, without injury to itself when properly applied within its rating.

Communication Circuit: See Section 800-1.

***Concealed:** Rendered inaccessible by the structure or finish of the building. Wires in concealed raceways are considered concealed, even though they may become accessible by withdrawing them.

Conductor:

BARE: A bare conductor is one having no covering or insulation whatsoever. (See "Conductor, Covered.")

COVERED: A covered conductor is one having one or more layers of nonconducting materials that are not recognized as insulation under the Code. (See "Conductor, Bare.")

INSULATED: An insulated conductor is one covered with material recognized as insulation.

***Connector, Pressure (Solderless):** A pressure wire connector is a device which establishes the connection between two or more conductors or between one or more conductors and a terminal by means of mechanical pressure and without the use of solder.

Continuous Load: A load where the maximum current is expected to continue for three hours or more.

Control Circuit: See Section 430-71.

Controller: A device, or group of devices, which serves to govern, in some predetermined manner, the electric power delivered to the apparatus to which it is connected. See also Section 430-81(a).

Cooking Unit, Counter-Mounted: An assembly of one or more domestic surface heating elements for cooking purposes designed for flush mounting in, or supported by, a counter, and which assembly is complete with inherent or separately mountable controls and internal wiring. (See "Oven, Wall-Mounted.")

Current Limiting Overcurrent Protective Device: (See Section 240-27.)

***Cutout Box:** An enclosure designed for surface mounting and having swinging doors or covers secured directly to and telescoping with the walls of the box proper. (See "Cabinet.")

***Demand Factor:** The demand factor of any system, or part of a system, is the ratio of the maximum demand of the system, or part of a system, to the total connected load of the system, or of the part of the system under consideration.

Device: A unit of an electrical system which is intended to carry but not utilize electric energy.

Disconnecting Means: A device, or group of devices, or other means whereby the conductors of a circuit can be disconnected from their source of supply.

Dry: (See "Location - Dry.")

Dust-Ignition-Proof: See Section 502-1.

***Dustproof:** So constructed or protected that dust will not interfere with its successful operation.

***Dust-tight:** So constructed that dust will not enter the enclosing case.

Duty:

***CONTINUOUS:** Continuous duty is a requirement of service that demands operating at a substantially constant load for an indefinitely long time.

***INTERMITTENT:** Intermittent duty is a requirement of service that demands operating for alternate intervals of (1) load and no load; or (2) load and rest; or (3) load, no load and rest.

***PERIODIC:** Periodic duty is a type of intermittent duty in which the load conditions are regularly recurrent.

***SHORT TIME:** Short time duty is a requirement of service that demands operation at a substantially constant load for a short and definitely specified time.

***VARYING:** Varying duty is a requirement of service that demands operations at loads, and for intervals of time, both of which may be subject to wide variation.

See Table 430-22 (a - Exception) for illustrations of various types of duty.

Duty Cycle (Welding): See Section 630-31(c).

***Electric Sign:** A fixed, stationary or portable, self-contained, electrically illuminated utilization equipment with words or symbols designed to convey information or attract attention.

***Enclosed:** Surrounded by a case which will prevent a person from accidentally contacting live parts.

Equipment: A general term including material, fittings, devices, appliances, fixtures, apparatus and the like used as a part of, or in connection with, an electrical installation.

***Explosion-proof Apparatus:** Apparatus enclosed in a case which is capable of withstanding an explosion of a specified gas or vapor which may occur within it and of preventing the ignition of a specified gas vapor surrounding the enclosure by sparks, flashes, or explosion of the gas or vapor within, and which operates at such an external temperature that a surrounding flammable atmosphere will not be ignited thereby.

Exposed: (As applied to live parts.) Exposed means that a live part can be inadvertently touched or approached nearer than a safe distance by a person. It is applied to parts not suitably guarded, isolated or insulated. (See "Accessible" and "Concealed.")

***Exposed:** (As applied to wiring method.) Exposed means not concealed.

***Externally Operable:** Externally operable means capable of being operated without exposing the operator to contact with live parts.

This term is applied to equipment, such as a switch, that is enclosed in a case or cabinet.

Feeder: A feeder is the circuit conductors between the service equipment, or the generator switchboard of an isolated plant, and the branch circuit overcurrent device.

Festoon Lighting: See Section 730-6.

Fitting: An accessory such as a locknut, bushing or other part of a wiring system which is intended primarily to perform a mechanical rather than an electrical function.

Garage: A building or portion of a building in which one or more self-propelled vehicles carrying volatile, flammable liquid for fuel or power are kept for use, sale, storage, rental, repair, exhibition or demonstrating purposes, and all that portion of a building which is on or below the floor or floors in which such vehicles are kept and which is not separated therefrom by suitable cutoffs.

Ground: A ground is a conducting connection, whether intentional or accidental, between an electrical circuit or equipment and earth, or to some conducting body which serves in place of the earth.

Grounded: Grounded means connected to earth or to some conducting body which serves in place of the earth.

Grounded (Effectively Grounded Communication System): See Section 800-2(d).

Grounded Conductor: A system or circuit conductor which is intentionally grounded.

Grounding Conductor: A conductor used to connect equipment or the grounded circuit of a wiring system to a grounding electrode or electrodes.

Grounding Conductor, Main: (Ungrounded system) the conductor connecting the equipment grounding conductor at the service to the grounding electrode.

Grounding Conductor, Common Main: (Grounded system) the conductor that connects both the circuit grounded conductor and the equipment grounding conductor to the grounding electrode.

The above definition does not apply to a conductor used as both the grounded and grounding conductor, as permitted in Section 250-52 for services and Section 250-60 for ranges and clothes dryers.

Grounding Conductor, Equipment: A conductor used to connect the equipment being grounded to the service equipment enclosure.

Guarded: Covered, shielded, fenced, enclosed or otherwise protected, by means of suitable covers or casings, barriers, rails or screens, mats or platforms, to remove the liability of dangerous contact or approach by persons or objects to a point of danger.

Hazardous Locations: See Article 500.

Header: See Section 356-1.

Header Ducts: See Section 358-1.

Hoistway: Any shaftway, hatchway, well hole, or other vertical opening or space in which an elevator or dumbwaiter is designed to operate.

Identified: Identified, as used in this Code in reference to a conductor or its terminal, means that such conductor or terminal is to be recognized as grounded. See Article 200.

***Isolated:** Isolated means that an object is not readily accessible to persons unless special means for access are used.

***Lighting Outlet:** An outlet intended for the direct connection of a lampholder, a lighting fixture or a pendant cord terminating in a lampholder.

Location:

DAMP LOCATION: A location subject to a moderate degree of moisture, such as some basements, some barns, some cold storage warehouses, and the like.

DRY LOCATION: A location not normally subject to dampness or wetness. A location classified as dry may be temporarily subject to dampness or wetness, as in the case of a building under construction.

WET LOCAtION: A location subject to saturation with water or other liquids, such as locations exposed to weather, washrooms in garages, and like locations. Installations underground or in concrete slabs or masonry in direct contact with the earth shall be considered as wet locations.

Low-Energy Power Circuit: A circuit which is not a remote-control or signal circuit but which has the power supply limited in accordance with the requirements of Class 2 remote control circuits. See Article 725.

Such circuits include electric door openers and circuits used in the operation of coin operated phonographs.

Multioutlet Assembly: A type of surface of flush raceway designed to hold conductors and attachment plug receptacles, assembled in the field or at the factory.

***Nonautomatic:** Nonautomatic means that the implied action requires personal intervention for its control. (See "Automatic.")

As applied to an electric controller, nonautomatic control does not necessarily imply a manual controller, but only that personal intervention is necessary.

***Outlet:** A point on the wiring system at which current is taken to supply utilization equipment.

***Outline Lighting:** An arrangement of incandescent lamps or gaseous tubes to outline and call attention to certain features such as the shape of a building or the decoration of a window.

Oven, Wall-Mounted: A domestic oven for cooking purposes designed for mounting in or on a wall or other surface.

Panelboard: A single panel or group of panel units designed for assembly in the form of a single panel; including buses, and with or without switches and/or automatic overcurrent protective devices for the control of light, heat or power circuits of small individual as well as aggregate capacity; designed to be placed in a cabinet or cutout box placed in or against a wall or partition and accessible only from the front. (See "Switchboard.")

Projector, Nonprofessional: See Section 540-30.

Projector, Professional: See Section 540-10.

Qualified Person: One familiar with the construction and operation of the apparatus and the hazards involved.

Raceway: Any channel for holding wires, cables or busbars, which is designed expressly for, and used solely for, this purpose.

Raceways may be of metal or insulating material and the term includes rigid metal conduit, rigid nonmetallic conduit, flexible metal conduit, electrical metallic tubing, underfloor raceways, cellular concrete floor raceways, cellular metal floor raceways, surface raceways, structural raceways, wireways and busways.

***Raintight:** So constructed or protected that exposure to a beating rain will not result in the entrance of water.

***Readily Accessible:** Capable of being reached quickly, for operation, renewal, or inspections, without requiring those to whom ready access is requisite to climb over or remove obstacles or to resort to portable ladders, chairs, etc. (See "Accessible.")

Receptacle (Convenience Outlet): A receptacle is a contact device installed at an outlet for the connection of an attachment plug and flexible cord.

***Receptacle Outlet:** An outlet where one or more receptacles are installed.

Remote-Control Circuit: Any electrical circuit which controls any other circuit through a relay or an equivalent device.

Sealable Equipment: Equipment enclosed in a case or cabinet that is provided with means of sealing or locking so that live parts cannot be made accessible without opening the enclosure. The equipment may or may not be operable without opening the enclosure.

Sealed (Hermetic Type) Motor Compressor: A mechanical compressor consisting of a compressor and a motor, both of which are enclosed in the same sealed housing, with no external shaft nor shaft seals, the motor operating in the refrigerant atmosphere.

Service: The conductors and equipment for delivering energy from the electricity supply system to the wiring system of the premises served.

***Service Cable:** The service cable is the service conductors made up in the form of a cable.

Service Conductors: The supply conductors which extend from the street main, or from transformers to the service equipment of the premises supplied.

Service Drop: The overhead service conductors from the last pole or other aerial support to and including the splices, if any, connecting to the service entrance conductors at the building or other structure.

Service-Entrance Conductors, Overhead System: The service conductors between the terminals of the service equipment and a point usually outside the building, clear of building walls, where joined by tap or splice to the service drop.

Service-Entrance Conductors, Underground System: The service conductors between the terminals of the service equipment and the point of connection to the service lateral.

Where service equipment is located outside the building walls, there may be no service-entrance conductors, or they may be entirely outside the building.

Service Equipment: The necessary equipment, usually consisting of circuit-breaker or switch and fuses, and their accessories, located near point of entrance of supply conductors to a building and intended to constitute the main control and means of cutoff for the supply to that.

Service Lateral: The underground service conductors between the street main, including any risers at a pole or other structure or from transformers, and the first point of connection to the service entrance conductors in a terminal box or meter or other enclosure with adequate space, inside or outside the building wall. Where there is no terminal box, or meter or other

enclosure with adequate space, the point of connection shall be considered to be the point of entrance of the service conductors into the building.

Service Raceway: The rigid metal conduit, electrical metallic tubing, or other raceway, that encloses the service entrance conductors.

Setting: (Of Circuit-breaker.) The value of the current at which it is set to trip.

Show-Window: A show-window is any window used or designed to be used for the display of goods or advertising material, whether it is fully or partly enclosed or entirely open at the rear, and whether or not it has a platform raised higher than the street floor level.

Sign: See "Electric Sign."

Signal Circuit: Any electrical circuit which supplies energy to an appliance which gives a recognizable signal.

Such circuits includes circuits for door bells, buzzers, code-calling systems, signal lights, and the like.

Special Permission: The written consent of the authority enforcing this Code.

Switches:

***GENERAL USE SWITCH:** A general use switch is a switch intended for use in general distribution and branch circuits. It is rated in amperes, and it is capable of interrupting its rated current at its rated voltage.

GENERAL USE SNAP SWITCH: A form of general use switch so constructed that it can be installed in flush device boxes, or on outlet box covers, or otherwise used in conjunction with wiring systems recognized by this Code.

AC GENERAL USE SNAP SWITCH: A form of general use snap switch suitable only for use on alternating current circuits for controlling the following:

(a) Resistive and inductive loads (including electric discharge lamps) not exceeding the ampere rating at the voltage involved.

(b) Tungsten filament lamp loads not exceeding the ampere rating at 120 volts.

(c) Motor loads not exceeding 80 per cent of the ampere rating of the switches at the rated voltage.

All AC general use snap switches are marked "AC" in addition to their electrical rating.

AC-DC GENERAL USE SNAP SWITCH: A form of general use snap switch suitable for use on either direct or alternating current circuits for controlling the following:

(a) Resistive loads not exceeding the ampere rating at the voltage involved.

(b) Inductive loads not exceeding one-half the ampere rating at the voltage involved, except that switches having a marked horsepower rating are suitable for controlling motors not exceeding the horsepower rating of the switch at the voltage involved.

(c) Tungsten filament lamp loads not exceeding the ampere rating at 125 volts, when marked with the letter "T".

AC-DC general use snap switches are not generally marked AC-DC; but are always marked with their electrical rating.

***ISOLATING SWITCH:** An isolating switch is a switch intended for isolating an electric circuit from the source of power. It has no interrupting rating, and it is intended to be operated only after the circuit has been opened by some other means.

MOTOR CIRCUIT SWITCH: A switch, rated in horsepower, capable of interrupting the maximum operating overload current of a motor of the same horsepower rating as the switch at the rated voltage.

Switchboard: A large single panel, frame, or assembly of panels, on which are mounted, on the face or back or both, switches, overcurrent and other protective devices, buses and usually instruments. Switchboards are generally accessible from the rear as well as from the front and are not intended to be installed in cabinets. (See "Panelboard.")

Thermal Cutout: An overcurrent protective device which contains a heater element in addition to and affecting a renewable fusible member which opens the circuit. It is not designed to interrupt short circuit currents.

Thermally Protected: (As applied to motors.) The words "Thermally Protected" appearing on the nameplate of a motor or motor-compressor indicate that the motor is provided with a thermal protector.

Thermal Protector: (As applied to motors.) A thermal protector is a protective device for assembly as an integral part of a motor or motor-compressor and which, when properly applied,

protects the motor against dangerous overheating due to overload and failure to start.

The thermal protector may consist of one or more sensing elements integral with the motor or motor-compressor and an external control device.

***Utilization Equipment:** Utilization equipment is equipment which utilizes electric energy for mechanical, chemical, heating, lighting, or similar useful purposes.

***Ventilated:** Provided with a means to permit circulation of air sufficient to remove an excess of heat, fumes or vapors.

Volatile Flammable Liquid: A flammable liquid having a flash point below 100°F. or whose temperature is above its flash point.

***Voltage (of a circuit):** Voltage is the greatest root-mean-square (effective) difference of potential between any two conductors of the circuit concerned.

On various systems such as 3-phase 4 wire, single phase 3 wire and 3 wire direct current, there may be various circuits of various voltages.

Voltage to Ground: In grounded circuits the voltage between the given conductor and that point or conductor of the circuit which is grounded; in ungrounded circuits, the greatest voltage between the given conductor and any other conductor of the circuit.

Watertight: So constructed that moisture will not enter the enclosing case.

***Weatherproof:** Weatherproof means so constructed or protected that exposure to the weather will not interfere with successful operation.

Raintight or watertight equipment may fulfill the requirements for "weatherproof." However, weather conditions vary and consideration should be given to conditions resulting from snow, ice, dust, or temperature extremes.

Welder, Electric:

RATED PRIMARY CURRENT: Section 630-31(c).

ACTUAL PRIMARY CURRENT: Section 630-31(c).

Wet: (See "Location - Wet.")

X-ray:

LONG TIME RATING: Section 660-1.

MOMENTARY RATING: Section 660-1.